

Glencoe McGraw-Hill
Math Connects Courses 1, 2, and 3, Grades 6-8

Degree of Evidence regarding the Standards for Mathematical Practice:

Limited Evidence

Summary of evidence:

1. **Make sense of problems and persevere in solving them.** This practice is undeveloped. The reviewers noted that the typical lesson structure—provide rule/procedure followed by explicit examples and practice of the rule/procedure—hinders students’ development of this mathematical practice. Because students are taught very specific ways to engage with the mathematics, there are few opportunities for sense making. There are limited experiences with making conjectures and solving problems with multiple entry points.
2. **Reason abstractly and quantitatively.** There is limited evidence of this practice throughout the sampled materials. Sense making and connections are sometimes emphasized in the “mini labs,” but these sections are not part of the core lessons nor tied to the student exercises. Problem-solving situations offer opportunities for sense making, but there is limited support for the teacher in facilitating this.
3. **Construct viable arguments and critique the reasoning of others.** This practice is underdeveloped. Reviewers noted very few activities requiring students to communicate their ideas with one another. The Higher Order Thinking (HOTS) activities require students to explain and justify their thinking, but these are at the end of the student exercises, making them less likely to be incorporated into daily practice.
4. **Model with mathematics.** This practice is not fully developed. Reviewers noted some examples where models are used to develop conceptual understanding; for example, in Course 2 models are illustrated in order to explain measurement formulas. However, this practice is not consistently nor fully integrated. In the sampled sections, students do not work with or develop the models themselves; rather, they are provided with illustrations or told specifically which model to use.
5. **Use appropriate tools strategically.** This practice is not well developed in the sampled materials. Students are provided opportunities to use tools (e.g., grid paper to model or calculate area). However, students do not select the tools for themselves or discuss their usefulness or limitations. In most cases, students are told specifically how to use the tools.
6. **Attend to precision.** There is limited evidence of this practice. The examples in the student materials use proper notation, and the reviewers noted some instances of the resource making distinctions between accuracy and precision and providing notes to teachers and/or students about careful use of vocabulary. However, there is no evidence in the sampled sections of student-to-student communication about precision being integrated in classroom practice, as described in this standard.
7. **Look for and make use of structure.** There is limited evidence of this practice. Reviewers noted some opportunities for students to engage in this practice; for example, students use pattern and structure to develop the Pythagorean theorem in Course 3. However, they also noted that this practice is sometimes undermined, because the resource typically states the generalization that it wants students to have.
8. **Look for and express regularity in repeated reasoning.** Although moderate evidence of this practice was noted in Course 3, overall the evidence of this practice is limited throughout the sampled materials. There are some examples of students using models or tools to investigate regularity and develop algebraic rules in Courses 2 and 3, but few examples were noted in Course 1.